Locus-in v.2 and **GeneView**^{PLUS} : Computer softwares for entry and analysis of the human genome data

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The ultimate goal of human genome project is the identification of the entire genes and elucidation of their function through sequencing. For this ambitious goal, creation and efficient use of various databases for genome mapping are necessary. Mapping data are being compiled into GDB (Genome Data Base) with international collaborative efforts. Search queries to GDB can be carried out via network using various protocols such as vt100 terminal, X-server/client, gopher, mosaic, and SQL. Flat files of sybase tables of GDB are available for ftp. Thus, the GDB has become an inevitable international resource for the archive of human genome analysis. It is however yet necessary for developing user friendly softwares.

We have developed new softwares, **Locus-in v.2** and **GeneView**^{PLUS} , which are designed for entry of raw mapping data, integration of various genome maps, and efficient use of GDB data. Both systems operate on a workstation with X-window and have smooth graphical user interfaces.

Locus-in v.2 has the following unique functions: (1) to graphically display chromosome ideograms (800 band-level) and zoom-in to a specific region of interest; (2) to generate sub-windows regarding a specific region for entry and display of raw or published data, and ordered or not-ordered data; (3) to create new breakpoints for boundaries of sub-windows; (4) to construct database by entering mapping objects into these sub-windows on graphic display; (5) to refer published mapping data from GDB through sub-windows; (6) to show detailed information of each map object by clicking it; and (7) to manage the ownership of data from multiple researchers of different laboratories. Fig. 1 shows a representative scene in which chromosome 3p24.2-p13 and its expanded sub-region 3p21.2-p14.1 are selected for entry of raw data and to refer published GDB data. A number of small windows containing locus name or clone name are seen.

GeneView^{PLUS} has the following characteristics: (1) to quickly search GDB data with easy operation; (2) to accept both English and Japanese; (3) to show the result on graphical chromosome ideograms; (4) to zoom-in to an interested region; and (5) to show additional information by clicking each map object. Fig. 2 shows a representative map display window which is evoked in Japanese mode. Chromosome 7p22-q11.21 is expanded and the locations of many loci are indicated as bars. Additional loci data if any can be retrieved by scrolling.

Locus-in v.2 and **GeneView**^{PLUS} will be demonstrated on workstation at the meeting site.

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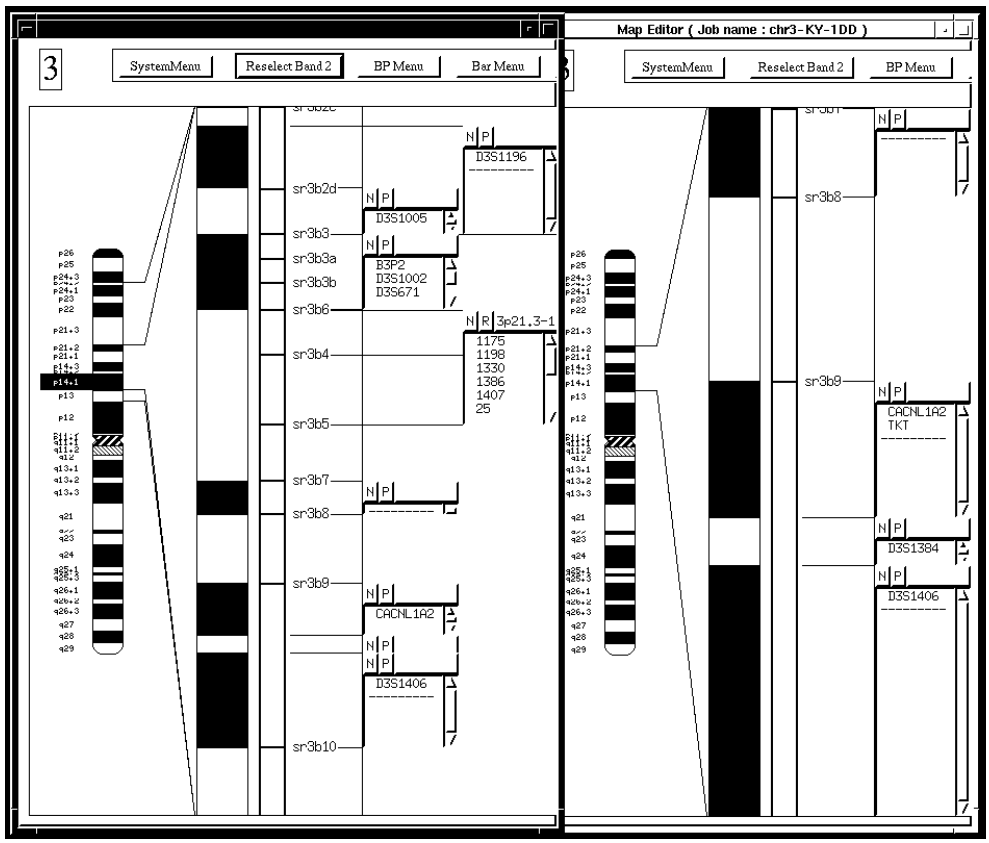
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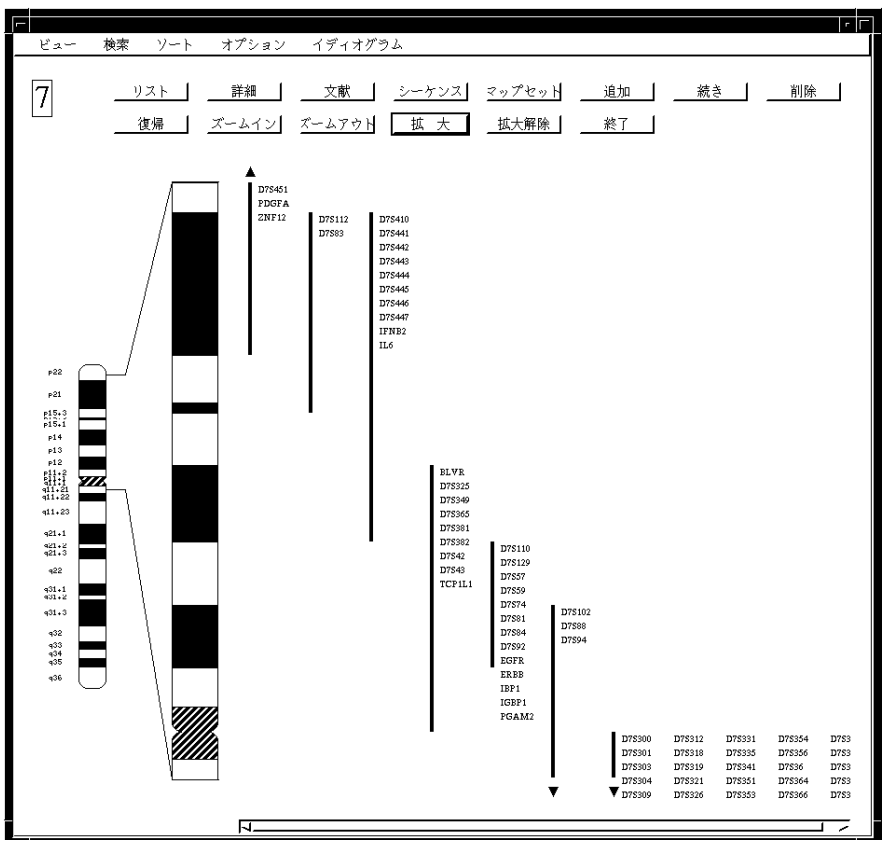
SystemMenu
Reselect Band 2
BP Menu
Bar Menu
sr3b2d
sr3b3
sr3b3a
sr3b3b
sr3b6
sr3b4
sr3b5
sr3b7
sr3b8
sr3b9
sr3b10
D3S1196
D3S1005
B3P2
D3S1002
D3S671
3p21.3-1
1175
1198
1330
1386
1407
25
CACNL1A2
D3S1406
sr3b8
sr3b9
CACNL1A2
TKT
D3S1384
D3S1406

Fig.1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PDGFA
ZNF12
D7S112
D7S83
D7S410
D7S441
D7S442
D7S443
D7S444
D7S445
D7S446
D7S447
IFNB2
IL6
BLVR
D7S325
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D7S42
D7S43
TCP1L1
D7S110
D7S129
D7S57
D7S59
D7S74
D7S81
D7S84
D7S92
EGFR
ERBB
IBP1
IGBP1
PGAM2
D7S102
D7S88
D7S94

Fig.2